AFFIDAVIT ACCORDING TO RULE 1.132

I, George L'Heureux, affirm for the record that:

1. I reside at 373 Ridgeview Avenue, Scotch Plains, NJ 07076 and have personal knowledge and competency to the matters stated herein.

2. I am an inventor of Application Serial No. 10/657,687 which is currently being appealed.

3. The abovementioned patent application is being appealed because the Examiner is maintaining the rejections that (1) claims 1-19 are obvious over Ogano in view of Brehm or Whitacre and (2) claims 1-9 and 11-19 are obvious over Walker in view of Holubec and further in view of Brehm or Whitacre.

4. The claimed invention is a lubricating oil composition suitable for four stroke marine engines comprising metal detergent, molybdenum, zinc dialkyl dithiophosphate and a unique rust inhibitor system comprising a combination of two rust inhibitors - (i) as a first rust inhibitor, an ethoxylated C_4-C_{18} alkyl phenol having 2-10 moles of ethylene oxide per mole and a second rust inhibitor from the group comprising of (ii) a glycerol ester of a C_8-C_{22} fatty acid, (iii) a half ester of a C_8-C_{22} alkyl or alkenyl succinic acid and a C_2-C_4 alkylene glycol and (iv) a C_8-C_{22} alkyl or alkenyl succinic acid or anhydride - produces a surprising result in regards to rust inhibition performance defined by the total percentage of rust (i.e. % Rust) as illustrated in the data below. The rust inhibitor system of the present invention provides better-than-expected rust performance.

5. I prepared the two sets of data provided below. The method of preparation and testing procedure are described to the best of my ability.

DATA

A. First Data Set

This data set includes the following three examples- Examples 1-3: (1) a formulation with only an ethoxylated C_4-C_{18} alkyl phenol having 2-10 moles of ethylene oxide per mole (Infineum C9484) which is one of the rust inhibitors that makes up the rust inhibitor system of the invention; (2) a formulation with only a C_8-C_{22} alkyl or alkenyl succinic acid or anhydride (Infineum C9480) which is the other rust inhibitor that makes up the rust inhibitor system of the invention; (3) and a formulation with the rust inhibitor system of the invention comprising a combination of Infineum C9484 and Infineum C9480.

Compositional information for Examples 1-3 is included in Table 1 below. Examples 1-3 all contain Infineum D1572 which is made up of (a) 8.915 mass % of a dispersant, Infineum C9260; (b) 1.574 mass % of zinc dialkyl dithiophosphate, Infineum C9417; (c) 1.966 mass % of diluent, APP SN150; (d) 1.258 mass % of magnesium sulfonate, Infineum C9340; (e) 1.048 mass % of calcium phenate, Infineum C9380;

(f) 0.335 mass % of an antioxidant, Infineum C9454; (g) 0.005 mass% of demulsifier, Infineum C9499; and (h) 0.002 mass % of antifoam agent, Infineum C9474.

Table 1. Compositional Information for Examples 1-3

Component	Generic Description	Ex. 1 [mass %]	Ex. 2 [mass %]	Ex. 3 [mass %]
Infineum D1572	DI Package	15.103	15.103	15.103
Viscoplex 1-156	Pour point Depressant	0.209	0.209	0.209
Paratone 8010	Viscosity Modifier	7.062	7.062	7.062
XOM EHC-45	Group II Base Stock	35.326	35.326	35.326
CITGO 325N	Group I Base Stock	42.300	42.300	42.300
Infineum C9484		0.65	0.00	0.325
Infineum C9480		0.00	0.65	0.325

The examples were tested according to a modified National Marine Manufacturers Association (NMMA) FC-W Rust Test. The NMMA FC-W rust test evaluates the ability of an oil to protect a steel surface from rust. Under our testing method, steel coupons that had been dipped in oil were subjected to a salt humidity cabinet for 24 hours. The steel coupons were then rated to determine how much of the surface was covered by rust, and the results from multiple coupons were then averaged. We used two (2) steel coupons per oil instead of the four (4) coupons per oil specified in the NMMA FC-W rust test. Test results for Examples 1-3 are shown in Table 2 below.

Table 2. Rust Performance of Examples 1-3

	Ex. 1	Ex. 2	Ex. 3
% Rust	19	2	1.5

The results in Table 2 illustrate the surprising rust performance of lubricant compositions according to the present invention. One of ordinary skill in the art would expect lubricant compositions of the present invention which comprise equal parts of Infineum C9484 and Infineum C9480 would exhibit rust performance between the rust performance of lubricant compositions containing only Infineum C9484 and lubricant compositions containing only Infineum C9480. Surprisingly, a lubricant composition according to the present invention exhibits rust performance superior to that of a lubricant composition containing only Infineum C9480 which is superior to a lubricant composition containing only Infineum C9484. In conclusion, the First Data Set shows

that lubricant compositions according to the present invention exhibit surprising and unexpected results in terms of rust performance.

B. Second Data Set

This data set contains Examples 4-9 and builds on Examples 1-3 above by varying the concentration of rust inhibitor added to a commercial oil IM 12930A-2. The composition of IM 12930A-2 is shown in Table 3.

Table 3. Compositional Information for Commercial Oil IM 12930A-2

Component	Generic Description	mass %
Infineum D1572	DI Package	15.103
Viscoplex 1-156	Pour point Depressant	0.209
Paratone 8010	Viscosity Modifier	7.062
XOM EHC-45	Group II Base Stock	35.326
CITGO 325N	Group I Base Stock	42.300

Compositional information for Examples 4-9 is included in Table 4 below.

Table 4. Compositional Information for Examples 4-9

Component	Generic Description	Ex. 4 [mass %]	Ex. 5 [mass %]	Ex. 6 [mass %]	Ex. 7 [mass %]	Ex. 8 [mass %]	Ex. 9 [mass %]
IM 12930A-2	Commercial Oil	99.2	99.2	99.35	99.35	99.5	99.5
Infineum C9484		0.00	0.40	0.00	0.325	0.00	0.25
Infineum C9480		0.80	0.40	0.65	0.325	0.50	0.25

The examples were tested in according to the modified NMMA FC-W Rust Test described above. Test results for Examples 4-9 are shown in Table 5 below.

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Table 5. Rust Performance of Examples 4-9

	Ex. 4	Ex. 5	Ex. 6	Ex. 7	Ex. 8	Ex. 9
% Rust	74.5	4.5	54.5	8.5	65	8

The Second Data Set confirms the surprising result exhibited by lubricant compositions according to the invention. Surprisingly, each lubricant composition according to the present invention exhibits rust performance superior to that of a lubricant composition containing only Infineum C9480 which has already been shown to be superior to that of a lubricant composition containing only Infineum C9484.
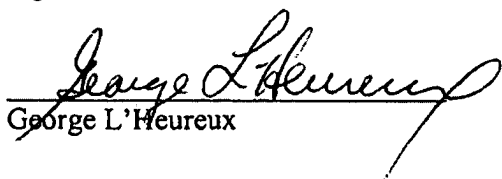
C. Comments about the Data

Because different blends of base stock and additives were utilized to formulate the compositions in the respective data sets, it is not possible to compare %Rust in the First Data Set to that in the Second Data Set. The First Data Set was based on IM15973A, and the Second Data Set was based on the commercial oil coded as IM12930A-2.
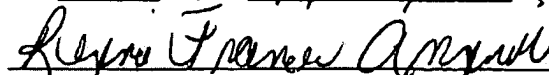
Also, due to lab variability, the test for the Second Data Set was more severe than the test for the First Data Set. Further, lubricant compositions that contain less rust inhibitor can show better rust performance because (a) the rust performance curve for rust inhibitors falls off sharply with the initial addition of rust inhibitor, and then levels off almost asymptotically as the rust inhibitor treat rate continues to go up and (b) the variability in the test at low levels of rust causes "bounce" in the results.

6. From the data provided above, it is apparent the lubricant composition of the present invention provides surprising rust performance which is not expected based on the teaching in the prior art.

Signed,

George L'Heureux

Subscribed and sworn to before me
this __2nd__ day of __APRIL, 200.9__

Notary Public for the State of New Jersey, United States of America
Regina Frances Anginoli